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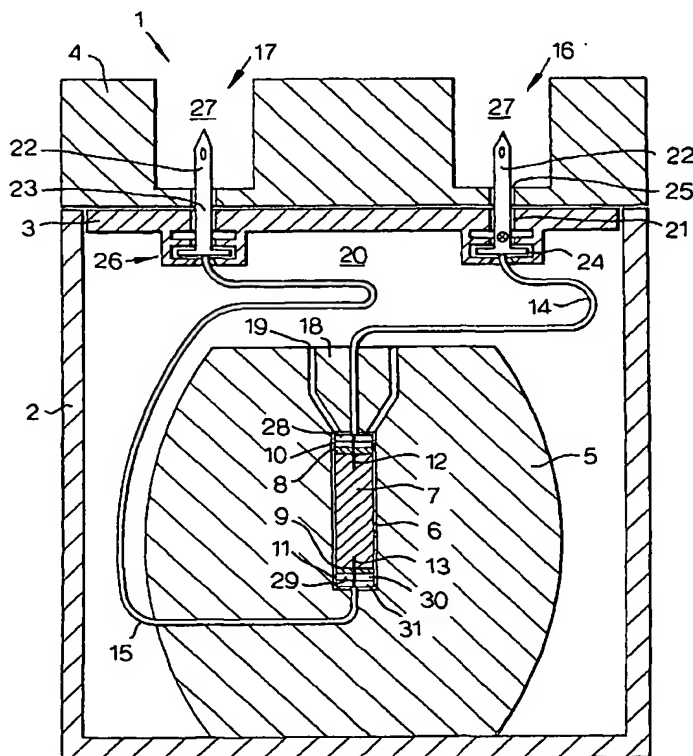
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(54) Title: **RADIOISOTOPE GENERATOR AND METHOD OF CONSTRUCTION THEREOF**



(57) Abstract: A device for producing a fluid containing a radioactive constituent, comprising a shielded chamber (5) with an opening for receiving an isotope container (6) housing a radioactive isotope (7); a chamber closure (18) adapted for cooperating with and closing the chamber opening; a first fluid port comprising a first hollow needle projecting into the shielded chamber from the chamber closure for fluid communication with the isotope container; a second fluid port comprising a second hollow needle projecting into the shielded chamber from the closed end of the chamber opposite the chamber closure for fluid communication with the isotope container; first and second compressible buffers (28, 29) mounted so as to surround at least partially the respective first and second hollow needles (12, 13), each buffer providing an outer surface for contact with opposed ends of the isotope container; and a spacer of a predetermined thickness associated with one or each of the first and second compressible buffers for determining the positioning of the isotope container within the shielded chamber.

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